

Amendments To The Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A polypeptide having β -fructofuranosidase activity which is obtained by the expression of a microbial gene, which polypeptide contains the amino acid sequences of SEQ ID NO:1 and SEQ ID NO:2 in whole or in part as an amino acid sequence.

2. (Original) The polypeptide according to claim 1 which catalyzes fructofuranosyl transfer between a fructofuranosyl donor and a fructofuranosyl acceptor.

3. (Original) The polypeptide according to claim 1 which has the following physicochemical properties:

- a. Molecular weight
About 44,000-55,000 Daltons in SDS-PAGE;
- b. Optimum pH
About 5.5-6.0 when incubated at 40°C for ten minutes;
- c. Optimum temperature

About 45'C and about 50'C in the absence of and
in the presence of calcium ion, respectively,
when incubated at pH 6.0 for ten minutes;

d. pH Stability

Stable at a pH of about 5.0-8.0 when incubated
at 4'C for 24 hours; and

e. Thermal stability

Stable up to a temperature of about 45'C when
incubated at pH 6.0 for one hour.

4. (Original) The polypeptide according to claim 1
which contains the amino acid sequence of SEQ ID NO:3 or a
homolog thereof.

5. (Original) The polypeptide according to claim 1
wherein is obtained using a microorganisms as a host wherein a
gene derived from a microorganisms of the genus Bacillus is
expressed in said host.

6. (Currently Amended) ~~A~~ An isolated DNA encoding
the a polypeptide according to claim 1.

7. (Currently Amended) The isolated DNA according
to claim 6 which contains the nucleotide sequence of SEQ ID
NO:4, ~~or homologs~~ variants of the nucleotide sequence of SEQ
ID NO:4 where one or more bases are replaced with other bases

with respect to the degeneracy of genetic code without
altering the amino acid sequence which they encode, or
complements thereof.

8. (Currently Amended) The isolated DNA according
to claim 6 which contains the nucleotide sequence of SEQ ID
NO:5, ~~or homologs~~ variants of the nucleotide sequence of SEQ
ID NO:5 where one or more bases are replaced with other bases
with respect to the degeneracy of genetic code without
altering the amino acid sequence which they encode, or
complements thereof.

9. (Currently Amended) The isolated DNA according
to claim 6 which is derived from a microorganism of the genus
Bacillus.

10. (Currently Amended) The isolated DNA according
to claim 6 which further contains a self-replicable vector.

11. (Currently Amended) A transformant ~~obtained~~
obtainable by introducing into an appropriate host a DNA
encoding the ~~(polypeptide having fructofuranosidase activity~~
~~which is obtained by the expression of a microbial gene, which~~
~~polypeptide contains the amino acid sequences of SEQ ID NO:1~~
~~and SEQ ID NO:2 in whole or in part as an amino acid sequence~~
isolated DNA according to claim 6.

12. (Original) The transformant according to claim 11 wherein said host is a microorganism.

13. (Original) A method for fructofuranosyl transfer comprising reacting a fructofuranosyl donor with a fructofuranosyl acceptor in the presence of a polypeptide having β -fructofuranosidase activity which is obtained by the expression of a microbial gene, which polypeptide contains the amino acid sequences of SEQ ID NO:1 and SEQ ID NO:2 in whole or in part as an amino acid sequence, wherein the reaction product is selected from the group consisting of xylosylfructoside, erlose, isomaltosylfructoside, lactosucrose, and fructosyltrehalose.

14. (Original) A method for fructofuranosyl transfer comprising reacting a fructofuranosyl donor with a fructofuranosyl acceptor in the presence of a polypeptide having β -fructofuranosidase activity which is obtained by the expression of a microbial gene, which polypeptide contains the amino acid sequences of SEQ ID NO:1 and SEQ ID NO:2 in whole or in part as an amino acid sequence, wherein 0.1-10 parts by weight of a fructofuranosyl acceptor is reacted with one part by weight of a fructofuranosyl donor at a pH of 3.5-8.0 at a temperature not above 60°C.

15. (New) A transformant obtainable by introducing into an appropriate host a DNA encoding the isolated DNA according to claim 7.

16. (New) A transformant obtainable by introducing into an appropriate host a DNA encoding the isolated DNA according to claim 8.

17. (New) A transformant obtainable by introducing into an appropriate host a DNA encoding the isolated DNA according to claim 9.

18. (New) A transformant obtainable by introducing into an appropriate host a DNA encoding the isolated DNA according to claim 10.